

Friese, found in arctic Siberia. *B. bizonatus*, Sm., is a superficially similar insect, but is easily separated by the entirely black hair of the face and vertex. The malar space also is considerably shorter in *bizonatus* than in the Sikkim so-called *trifasciatus*. I have no authentic *pyropygus*, but I have *B. kirbyellus*, Curtis, of which Friese considers *pyropygus* a subspecies, and on close comparison it seems to agree structurally with the Sikkim bee. It seems therefore that we may safely add *B. pyropygus* to the fauna of the Himalayas—a very interesting extension of range. We have indeed a somewhat parallel case in America, for a male of the arctic *B. kirbyellus* (det. Franklin) was taken by my wife in the arctic-alpine zone on the Truchas Peaks, New Mexico.

Cælioxyys grindeliæ, Cockerell.

Santa Fé, New Mexico, Aug. 2, 1912, 2 ♂ (*Cockerell*).

I have described the fourth ventral segment as entire, but the smooth median space is bounded on each side by a tooth, and if the segment is looked at from in front these teeth appear prominent, the interval between them becoming a shallow emargination. In *C. ribis kincaidi* the middle of the apical margin of the fourth segment is truncate, without any teeth.

Cælioxyys ribis, Cockerell.

Nova Scotia, ♀ (F. Smith's collection; British Museum).

This agrees with a specimen from Beulah, New Mexico, except that the apical part of the fourth ventral segment is quite closely beset with minute punctures, whereas in New Mexico *ribis* these punctures are much less evident and more nearly confined to the margin of the segment. With only a single specimen it cannot be determined whether there is a Nova Scotian race, distinguished by the character indicated.

XXVIII.—On the Geographical Races of *Vipera ammodytes*.
By G. A. BOULENGER, F.R.S.

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[Plate V.]

ON two previous occasions* I have briefly dealt with the varieties of *Vipera ammodytes*, and expressed my regret at

* Proc. Zool. Soc. 1903, i. p. 185, and Ann. & Mag. Nat. Hist. (7) xiv. 1904, p. 134. These papers have been entirely overlooked by Dr. E. Schreiber in his second edition of the 'Herpetologia Europea' (1912).

being unable, through want of material, to deal with specimens inhabiting Bulgaria and Transcaucasia. Having since obtained a specimen from Panagurishta, Bulgaria, through Prof. Kovatcheff, I am able to add Bulgaria to the habitat of the form described by me from Roumania under the name of var. *montandoni*. Col. Kaznakoff, Director of the Tiflis Museum, having been so kind as to send me, on loan, three specimens from Borzom, in the district of Gori, Prov. Tiflis, collected by Dr. G. Radde, I have reached the conclusion that, as I expected from Strauch's description*, the Transcaucasian form deserves to be distinguished as a further variety, for which I propose the name *transcaucasiana*.

This variety agrees with var. *montandoni* in the scutellation of the snout and in the number of ventral shields, but is distinguished by the dorsal markings, which agree with those of the typical *Vipera aspis*.

Snout narrower than in the typical form, with perfectly vertical loreal region, the canthus rostralis slightly raised. Naso-rostral shield not reaching the canthus rostralis nor the summit of the rostral shield, which is deeper than broad (this shield is transversely divided in the largest of the three specimens, but I regard it as an individual anomaly); rostral "horn" with two or three transverse series of scales between the rostral shield and the apex. Ventral shields 150 to 162. The dorsal zigzag band characteristic of the typical form and other varieties is absent; it is replaced by a series of narrow, transverse, black or dark brown bars which, on some parts of the body, break up into pairs, forming two alternating series; a Λ -shaped dark marking on the occiput; the dark colour on the lower lip broken up by light bars as in the typical form; end of tail pale yellow or yellowish green inferiorly.

I append a tabulation of the particulars of the specimens of *Vipera ammodytes* which I have been able to examine.

1. Total length (in millimetres). 2. Length of tail. 3. Number of scales across body. 4. Number of ventral shields. 5. Number of subcaudal shields (pairs). 6. Number of whorls of scales on rostral "horn." 7. Width of rostral shield. 8. Depth of rostral shield. 9. Number of scales across vertex between supraoculars (I. indicates a frontal shield). 10, 11. Number of upper labial shields (right and left). 12, 13. Upper labial shields (4th, 5th, or 6th) below the eye (right and left). 14, 15. Number of scales round the eye, supraocular excluded (right and left).

* 'Schlangen des Russischen Reichs,' p. 215 (1873).

Forma *typica*.

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.
1. ♂ ..	710	85	23	153	36	3	4½	4	6	9	9	4·5	4	11	11
2. ♀ ..	710	75	22	148	29	3	5	4	5	9	9	4·5	4·5	10	10
3. „ ..	670	75	23	153	29	3	5	4	5	10	9	4·5	4·5	12	10
4. ♂ ..	680	75	21	159	33	4	4	3½	6	9	9	4·5	4·5	11	12
5. „ ..	550	70	21	150	36	3	4	3	6	9	9	4·5	4·5	11	11
6. „ ..	670	80	21	158	33	3	4½	4	6	8	10	4	4·5	11	12
7. „ ..	620	75	23	155	34	4	4	3	6	9	9	4·5	4·5	11	13
8. „ ..	550	65	21	152	33	3	4	3	5	8	8	4·5	4·5	10	11
9. ♀ ..	660	60	25	156	27	3	4	3	6	9	9	4·5	4·5	13	10
10. „ ..	560	55	21	153	28	4	4	3	5	10	10	5·6	5·6	12	12
11. „ ..	500	55	21	148	29	3	4	3	5	9	9	4·5	4·5	11	11
12. „ ..	670	70	23	155	32	3	5	4	5	9	9	4·5	4·5	12	10
13. ♂ ..	760	90	21	155	37	4	5	4	6	10	10	4·5	4·5	13	12
14. „ ..	335	40	21	156	33	2	2½	2	2. I. 2	9	9	4·5	4·5	11	11
15. „ ..	760	95	21	157	27	3	5	4	5	8	9	4	4	10	9
16. „ ..	580	70	21	153	36	3	4	3½	2. I. 2	9	9	4·5	4·5	11	12
17. „ ..	560	65	21	157	35	3	3½	3	2. I. 2	9	9	4·5	4·5	12	13
18. ♀ ..	650	65	21	159	29	3	4	3	7	9	9	4·5	4·5	11	12
19. „ ..	580	55	21	159	24	3	3½	3	2. I. 2	8	8	4·5	4	10	9
20. „ ..	535	55	23	153	30	3	3	3	5	9	8	4·5	4·5	11	10
21. „ ..	420	43	21	154	29	3	2½	2½	5	9	8	3·4	3·4	10	11
22. „ ..	350	40	21	151	34	3	3½	2½	5	9	9	4·5	4·5	11	11
23. „ ..	640	70	21	154	30	3	4	3½	5	9	9	4·5	4·5	10	10
24. „ ..	340	38	21	154	30	3	2½	2½	7	10	10	4·5	4·5	11	11
25. ♂ ..	550	80	21	153	38	3	3½	3	7	9	9	4·5	4·5	11	11
26. ♀ ..	580	60	21	150	31	3	4	4	6	9	9	4·5	4·5	11	10
27. ♂ ..	730	?	21	155	?	3	5	3½	5	9	10	4·5	4·5	12	12
28. „ ..	670	70	22	157	33	3	4½	3½	5	9	9	4·5	4·5	13	12
29. ♀ ..	655	?	23	152	?	4	4	3	6	11	10	4·5	4·5	12	11
30. „ ..	610	70	22	162	37	3	4	3	5	9	9	4·5	4·5	12	12
31. „ ..	665	60	23	163	28	3	4	3	5	9	10	4·5	4·5	12	12
32. „ ..	480	50	21	160	33	3	3	2½	5	9	9	4·5	4·5	12	11
33. ♂ ..	670	80	21	154	36	3	4	3½	5	8	8	3·4	3·4	11	10
34. ♀ ..	500	50	21	160	30	4	4	3	5	11	12	4·5	5·6	11	13
35. ♂ ..	580	75	21	150	35	3	4	3	7	9	9	4·5	4·5	11	10
36. ♀ ..	620	70	21	159	35	3	4	3½	5	9	9	4·5	4·5	11	11
37. „ ..	520	60	21	154	33	3	3½	3½	7	11	10	5·6	4·5	10	11
38. ♂ ..	445	55	21	154	35	3	3	2½	2. I. 2	10	10	4·5	4·5	12	12
39. ♀ ..	320	35	23	147	28	2	2½	2	7	10	10	4·5	4·5	12	12
40. „ ..	540	60	23	157	34	4	4	4	7	10	10	4·5	4·5	12	12
41. „ ..	235	28	23	151	33	3	2½	1½	2. I. 2	9	9	4·5	4·5	11	13

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.
42. ♂ ..	740	95	23	155	38	3	4	3½	5	10	10	4·5	4·5	11	11
43. „ ..	610	80	21	149	36	3	3½	3	6	9	9	4·5	4·5	11	13
44. ♀ ..	590	65	23	154	30	3	4	3	6	10	10	4·5	4·5	11	12
45. ♂ ..	470	50	21	159	39	3	3	2½	5	9	9	4·5	4·5	10	10

1-3. Lastnitsch, Styria. 4, 5. Zabukoji, Styria. 6. Redschach, Styria. 7-11. Mahenberg, Styria, 12. Fautsch, Styria. 13. Pischätz, Styria. 14. Bozen, S. Tyrol. 15-22. Carinthia. 23, 24. Friesach, Carinthia. 25, 26. Landskron, Carinthia. 27-30. Villach, Carinthia. 31, 32. Feldkirchen, Carinthia. 33. St. Peter, Carniola. 34. Herkulesbad, Hungary. 35-37. Deva, Transylvania. 38. Dalmatia. 39. Zara, Dalmatia. 40. Vrlika, Dalmatia. 41. Sincar, Dinaric Alps, Bosnia. 42-44. Travnik, Bosnia. 45. Montenegro.

Var. montandoni.

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.
1. ♂ ..	555	70	21	158	38	3	4	5	5	9	9	4	4	11	11
2. „ ..	535	65	21	150	36	3	3½	4½	5	9	9	4·5	4·5	11	10
3. „ ..	470	55	21	152	37	3	3½	4½	7	10	9	5·6	4·5	12	12
4. ♀ ..	480	50	21	155	31	2	3½	4	5	9	10	4·5	4·5	11	11
5. „ ..	420	40	21	153	30	3	3	4	5	10	9	4·5	4·5	12	11
6. „ ..	195	25	21	149	33	4	2	2½	7	9	9	4·5	4·5	10	10
7. „ ..	520	60	21	153	32	3	3½	4	6	9	9	4·5	4·5	11	11
8. ♂ ..	510	?	21	155	?	3	4	4½	5	9	9	4	4	11	11
9. „ ..	380	45	21	156	34	3	3	4	7	9	9	4·5	4·5	11	10
10. ♀ ..	600	55	21	154	30	3	4	5	5	9	9	4·5	4	11	11
11. „ ..	490	50	21	155	30	3	3	4	7	9	9	4·5	4·5	10	10
12. „ ..	480	50	21	155	31	2	3½	4	5	9	10	4·5	4·5	11	11
13. „ ..	310	30	21	156	31	3	3	3½	6	9	9	4·5	4·5	10	10
14. „ ..	270	30	21	154	30	3	2½	3½	5	9	9	4·5	4·5	10	11
15. „ ..	305	28	21	160	30	3	2	3	6	9	9	4·5	4·5	10	10

1-6. Greci, Roumania. 7. Cocosu Monastery, Roumania. 8-14. Macin, Roumania. 15. Panagurishta, Bulgaria.

Var. transcaucasiana.

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.
1. ♂ ..	605	70	21	160	36	3	4	5	6	10	10	4·5	4·5	12	12
2. „ ..	200	23	21	155	36	3	2	3	8	11	11	5·6	5·6	11	11
3. ♀ ..	370	?	21	162	?	2	2½	3½	7	10	10	4·5	4·5	12	12

1-3. Borzom, Prov. Tiflis.

Var. *meridionalis*.

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.
1. ♀ ..	290	33	21	135	27	5	2½	2½	7	10	9	4·5	4·5	11	11
2. „ ..	205	25	21	137	30	4	2½	2	8	9	9	4·5	4·5	12	12
3. ♂ ..	355	45	21	142	34	3	3	3	6	9	9	4·5	4·5	12	11
4. „ ..	340	40	21	146	34	4	3	3	7	10	10	4·5	4·5	14	12
5. ♀ ..	275	35	21	142	27	4	3½	3½	7	9	9	4·5	4·5	12	12
6. „ ..	330	30	28	139	26	4	2½	2	7	10	9	4·5	4·5	11	11
7. „ ..	280	35	21	137	32	4	2½	2½	5	9	9	4·5	4·5	12	10
8. „ ..	210	22	21	138	27	3	2	2½	8	10	10	4·5	4·5	13	13
9. „ ..	230	28	21	137	32	5	2½	2	5	9	9	4·5	4·5	12	12
10. „ ..	275	35	21	145	34	3	2½	2½	8	9	9	4·5	4·5	10	11
11. „ ..	315	25	21	138	24	4	3½	3	7	9	9	4·5	4·5	12	12
12. ♂ ..	260	23	21	133	35	4	3	2½	5	9	9	4·5	4·5	11	12
13. ♀ ..	310	32	21	137	26	3	3	3	7	9	9	4·5	4·5	11	11

1. Tarsos, N. Morea. 2. Xenochori, N. Eubœia. 3-5. Athens. 6. Delos. 7. Tenos. 8. Mykonos. 9. Syra. 10. Adampol, Asia Minor. 11. Lebanon. 12, 13. Syria.

EXPLANATION OF PLATE V.

Vipera ammodytes, var. *transcaucasiana*. Head and anterior part of body of male, natural size, and enlarged side view of head of same.

XXIX.—*Some Notes on the Reedbucks, with a Description of Two new Subspecies.* By GILBERT BLAINE.

THE reedbucks are one of the most widely distributed groups of all the African antelopes. Their range extends over the whole of Africa below a line drawn at about 15° lat. N.

They inhabit grassy uplands where the bush is thin and scattered in the neighbourhood of streams, or wide plains bordering big rivers or lakes, generally consorting together in pairs or in small family parties. I have seen them in the open glades and grassy meadows that intersect dense forest-tracts on a high mountain-range, and also in a flat low-lying plain at the foot of the same mountain-range, where they frequented the borders of a large swamp during the day, forming dry beds in the reeds above the surface of the water, and emerging in the early mornings and evenings to feed on the coarse grass that grew on the adjacent open flats.